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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,216	03/30/2005	Fritz Wilhelm	23048	1268

535 7590 10/03/2006

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EXAMINER	
BOYKIN, TERRESSA M	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/530,216	WILHELM ET AL.	
	Examiner	Art Unit	
	Terressa M. Boykin	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

Claims 1- 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding each of claims which recite "preferably", such a phrase renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4138544 cols. 1-4, table 1, figures 1-5 and claims 1-26.

US 4138544 discloses a method of preparing a linear polycondensate of high molecular weight wherein a precondensate is initially formed and thereafter subjected to a one-step melt condensation in a vacuum while cleavage products are removed therefrom, the reaction mass being exposed in a thin layer by means of a stirrer to the reaction conditions, the improvement residing in employing as the precondensate a molten precondensate having an average condensation degree of at least 3, said precondensate being introduced into the melt condensation zone continuously while the

cleavage products are driven off at the particular optimum, product-specific condensation temperature, the contents of the melt condensation zone being subjected to the action of a rotary stirrer until the melt has a melt viscosity of 1000 to 15000 poises and continuously withdrawing molten polycondensate in accordance with the speed of the reaction. Also disclosed is an apparatus in which the polycondensation is effected including an offset withdrawal outlet containing an auger which can enter a funnel disposed between the outlet and the polycondensation zone. Also disclosed is an upright multi-chamber vessel in which the precondensate is formed wherein the chambers are disposed one over the other. Some of the upper chambers are equipped with means for maintaining a normal or elevated pressure while some of the lower chambers are equipped with means for imposing a partial vacuum on the contents.

This reference relates to a method of preparing linear polycondensates of high molecular weight, especially linear polyesters by the further condensation of precondensates in the melted in an one-step reactor equipped with means for removing cleavage products by the application of a vacuum or partial vacuum, the reaction mass being exposed in a thin layer to the reaction conditions by means of a stirrer.

This reference further relates to an apparatus in which precondensates are further condensed to form linear polycondensates.

This reference still further relates to a novel upright multi-chamber reactor in which precondensates are formed. The invention further relates to the combination of a precondensate reactor and an one-step polycondensate reactor.

The reference further contemplates an apparatus for carrying out the precondensation of monomers which comprises a vertically disposed heatable preliminary reactor having a plurality of chambers disposed vertically one over the other, means for feeding the contents thereof to the next lower chamber, means for maintaining a normal or elevated pressure on the contents of a plurality of upper chambers, means for maintaining a partial vacuum on the contents of lower chambers, the chambers provided with means for maintaining normal or elevated pressure provided with a common exhaust gas stock, at least some of said chambers equipped with rotary stirrer means.

The apparatus for effecting melt polycondensation of a precondensate in one-step which comprises a substantially horizontally disposed vessel whose longitudinal axis is horizontal, said vessel containing there within a stirrer rotatably disposed in the reactor interior and having stirrer elements extending circumferentially and longitudinally and adapted to the interior shape of said vessel, a flue opening in gaseous fluid communication with the interior of said vessel for removal of cleavage products, an inlet connection adjacent one end of said vessel and an outlet connection adjacent the other end having at least one withdrawal auger therein, means for rotating said stirrer and said auger, said outlet connection flaring toward the interior of said vessel to form a funnel, said auger extending into said funnel.

As the diol component the reference discloses the use of ethylene glycol, for example. The dicarboxylic acid component can be aromatic dicarboxylic acids such as, for example, terephthalic acid, or its dialkyl esters, preferably dimethylterephthalate, or mixtures of aromatic dicarboxylic acids, preferably mixtures of terephthalic and isophthalic acid, or of DMT and isophthalic acid, or of DMT and isophthalic acid dimethyl esters, preferably in a molar ratio of 95 : 5 to 60 : 40. If desired, a part of the isophthalic acid can be replaced by an aliphatic dicarboxylic acid such as adipic acid, sebacic acid and the like. The diols can also be glycol mixtures, e.g., 1,4-butanediol mixed with 1,6-hexanediol. If desired, a branched diol, such as neopentyl glycol, for example, can be used concomitantly in low proportions, of, for example, up to 10 mole-%.

The reference also discloses with regard to the apparatus that possesses a cross-section of the outlet pipe will flare towards the interior of the reactor to form a funnel, and the internal end of the withdrawal auger extends into this funnel. This entails the advantage that the forward portion of the withdrawal auger is immersed in the supply of melt that is in the funnel and draws it therefrom at a uniform rate of flow. The diameter of the funnel at the entrance into the reactor is at least twice as great as the diameter of the funnel in the unflared portion.

To promote the driving of the highly viscous polycondensate into the funnel by the revolving stirrer, the funnel, as seen in vertical cross sections, is, according to the reference, offset laterally from the vertical transverse axis of the reactor, in the direction of rotation of the stirrer. The outlet pipe is preferably directed vertically downwardly, although it can also be directed downwardly at an angle. With the outlet pipe thus disposed asymmetrically in relation to the funnel leading into it, it furthermore proves to be advantageous to construct the funnel, as seen in vertical cross section, with one portion of the wall, on the side farthest from the vertical transverse axis of the reactor, extending parallel or approximately parallel to the withdrawal auger, so that the polycondensate driven into the funnel will not, upon encountering this wall portion, be driven back upwardly into the reactor, but will instead be forced against the withdrawal auger. To reduce still further the possibility that the highly viscous melt might be drawn back upwardly out of the funnel, the stirrer elements revolving past the funnel can be made with a smaller diameter than the other stirrer elements.

The references discloses method for preparing polyesters prepared from the same components as claimed by applicants. Any properties or characteristics inherent in the prior art, e.g. although unobserved or detected by the reference, would still anticipate the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property,

inherently possessed by things in the prior art, does not cause claim drawn to those things ". Since the disclosed parameters, i.e. amounts, temperatures, pressures, are expressed differently , they nevertheless appear to overlap those claimed and thus are not distinguishable over the prior art. In view of the above, there appears to be no significant difference between the reference(s)and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa M. Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday-Thursday 10-5:30 Friday (work at home).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Terressa M. Boykin
Primary Examiner
Art Unit 1711

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